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## 081410 - Wood Doors

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## **SECTION 08 1410 - WOOD DOORS**

### **1.1 SUMMARY**

- A. The University prefers to use regional materials within a 500 mile radius of the campus.
- B. Section Includes:
  - 1. Interior and Exterior Doors
    - a. Interior flush-type mineral core fire-rated doors
    - b. Non-rated interior flush type solid core wood doors-No particle board cores allowed for Non-rated doors.
    - c. Custom Mahogany Entrance Doors.
    - d. Solid-core doors with wood-veneer faces.
    - e. Factory finishing flush wood doors.
    - f. Factory fitting flush wood doors to frames and factory machining for hardware.

### **1.2 SUBMITTALS**

- A. LEED Submittals: (Where applicable to project)
  - 1. Chain-of-custody certificates certifying that flush wood doors comply with forest certification requirements. Include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body
    - a. Include statement indicating costs for each certified wood product.
  - 2. For adhesives and composite wood products, documentation indicating that product contains no urea formaldehyde.

### **1.3 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Where applicable, a qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body.
- B. Quality Standard: In addition to requirements specified, comply with AWI's "Architectural Woodwork Quality Standards Illustrated."
- C. Forest Certification: Where applicable provide doors made with all wood products obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."
- D. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

1. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.
2. Temperature-Rise Limit: At vertical exit enclosures and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.

#### 1.4 MANUFACTURERS

A. Interior Door Manufacturers:

1. Algoma Hardwoods, Inc.
2. Eggers Industries.
3. Marshfield Door Systems, Inc.
- 4.
5. VT Industries Inc.

B. Exterior Door Manufactures: Mahogany

1. Chautauqua.
2. Haring Doors.

#### 1.5 DOOR CONSTRUCTION, GENERAL

- A. Interior Doors shall be 1 and 3/4-inch thick. Exterior doors shall be 2 and 1/4-inch thick and shall be coordinated with Chapter 5, Division 08, Section 084113.
- B. Exterior Wood Doors shall be used on campus at public entrances to existing buildings where the original doors were wood stile and rail doors. New construction requires consideration review to determine if wood doors are appropriate given the building's location, use and architectural character. It is preferred that doors serving as main entrances (there can be more than one) for significant institutional campus buildings be provided with doors principally of wood construction in a transparent finish as an identifying feature of a principal entrance. The style of the door (paneled vs flush), location and amount of glazing, etc. can vary to suit the building's architecture.
1. Exterior doors shall be installed in single door openings, or in double openings do not secure the exterior doors, rather secure the inner vestibule doors, leaving the vestibule unlocked 24/7.
  2. Exterior wood doors in new installations shall be installed in recessed or covered entries at least 4 ft deep. Rain diverters shall be installed as required.
  3. Hang doors by standard hinge placement.
- C. Low-Emitting Materials: Provide doors made with adhesives and composite wood products that do not contain urea formaldehyde.
- D. Fire-Protection-Rated Doors: Provide core specified or mineral core as needed to provide fire-protection rating indicated.

1. Edge Construction: Provide edge construction with intumescent seals concealed by outer stile. Comply with specified requirements for exposed edges. All wood door edge on latchside shall be beveled 1/8-inch on 2-inches.
2. Pairs: Provide fire-retardant stiles that are listed and labeled for applications indicated without formed-steel edges and astragals. Provide stiles with concealed intumescent seals. Comply with specified requirements for exposed edges.

## 1.6 WOOD-FACED DOORS FOR TRANSPARENT FINISH

### A. Exterior Solid-Core Doors:

1. Wood must be certified from a Sustainable Forest.
2. Exterior wood doors shall be stile and rail with a horizontal mid-rail at a height appropriate to conceal panic bar hardware, regardless if panic hardware is part of the installation or not at the time. Stiles shall be a minimum of 6-inch wide, top rail minimum 8-inch wide and bottom rail minimum 12-inch wide and center rail minimum 6-inch wide.
3. Door frames and sidelights shall be aluminum units. Wood frames shall be considered in limited applications and must be approved in advance by the University.
4. Grade: Premium, with Grade A faces.
5. Species: Honduran or African mahogany. Other wood species may be approved on a project-to-project basis with written University authorization. (Poplar and Red Oak are NOT approved species)
6. Match between Leaves: Book match.
7. Assembly of Leaves on Door Faces: Balance match.
8. No surface applied moldings.

### B. Interior Solid-Core Doors:

1. Grade: Premium, with Grade A faces.
2. Species: White oak, Red Oak, Maple, Ash, Cherry.
3. Cut: Rift cut.
4. Match between Veneer Leaves: Book match.
5. Assembly of Veneer Leaves on Door Faces: Balance match.
6. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
7. Core: Structural solid lumber.
8. Construction: Five plies. Stiles and rails are bonded to core, then entire unit abrasive planed before veneering. Faces are bonded to core using a hot press.

## 1.7 LIGHT FRAMES FOR INTERIOR DOORS

### A. Wood Beads for Light Openings in Wood Doors: Provide manufacturer's standard wood beads as follows unless otherwise indicated.

1. Wood Species: Same species as door faces.

2. Profile: Manufacturer's standard shape.
  3. At wood-core doors with 20-minute fire-protection ratings, provide wood beads and metal glazing clips approved for such use.
- B. Wood-Veneered Beads for Light Openings in Fire-Rated Doors: Manufacturer's standard wood-veneered noncombustible beads matching veneer species of door faces and approved for use in doors of fire-protection rating indicated. Include concealed metal glazing clips where required for opening size and fire-protection rating indicated.
- C. Metal Frames for Light Openings in Fire-Rated Doors: Manufacturer's standard frame formed of 0.048-inch- (1.2-mm-) thick, cold-rolled steel sheet; with baked-enamel- or powder-coated finish; and approved for use in doors of fire-protection rating indicated.

#### 1.8 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
1. Comply with requirements in NFPA 80 for fire-rated doors.
- B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.
- C. Openings: Cut and trim openings through doors in factory.
1. Light Openings: Trim openings with moldings of material and profile indicated.
  2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Chapter 5, Division 08, Section 088000.
- D. Exterior Doors: Factory treat exterior doors with water repellent after fabrication has been completed but before factory finishing.

#### 1.9 FACTORY FINISHING

- A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
- B. Finish doors at factory is required. Color selected by Owner.
1. Factory Finish to be warranted for a minimum of 3-5 years finish and labor.

#### 1.10 INSTALLATION

- A. Installation Instructions: Install doors to comply with manufacturer's written instructions and the referenced quality standard, and as indicated.

1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.
- B. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- C. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

END OF SECTION 08 1410